

# Exhibit 4

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Public  
Version

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**UNITED STATES DISTRICT COURT**  
**NORTHERN DISTRICT OF CALIFORNIA**  
**SAN FRANCISCO DIVISION**

GOOGLE LLC,

Plaintiff

v.

SONOS, INC.,

Defendant.

CASE NO. 3:20-cv-06754-WHA

Related to CASE NO. 3:21-cv-07559-WHA

**SUPPLEMENTAL EXPERT REPORT OF DR. DAN SCHONFELD REGARDING  
CLAIM 1 OF U.S. PATENT NO. 10,848,885**

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added to a “zone scene”—under the Court’s holding regarding “zone scene.” Because the term and concept of “zone scene” is pervasive in the claims, I have analyzed the prior art based on the guidance provided by the Court and I issue the following opinions.

**(b) Sonos’s Own Prior Art System**

12. The Court’s Order discussing the meaning of “zone scene” has affected the opinions that I originally issued regarding the invalidity of claim 1 of the ’885 patent.

13. First, Sonos’s own prior art system discloses “zone scenes” because it allowed a user to group zones together “with any other zone” to form a zone group. For example, as shown in the annotated images below, the user could link speakers to create a zone group (*e.g.*, “Kitchen and Garden”) and could then play music synchronously throughout the group.

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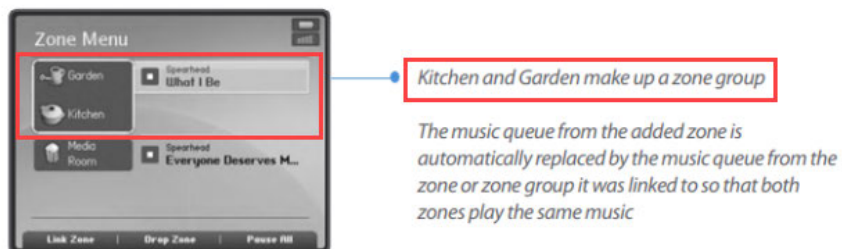
### Linking a zone

1. Press the **Zones** button on your Controller.



2. Highlight the zone or zone group that you want to add a zone to, and touch **Link Zone**.

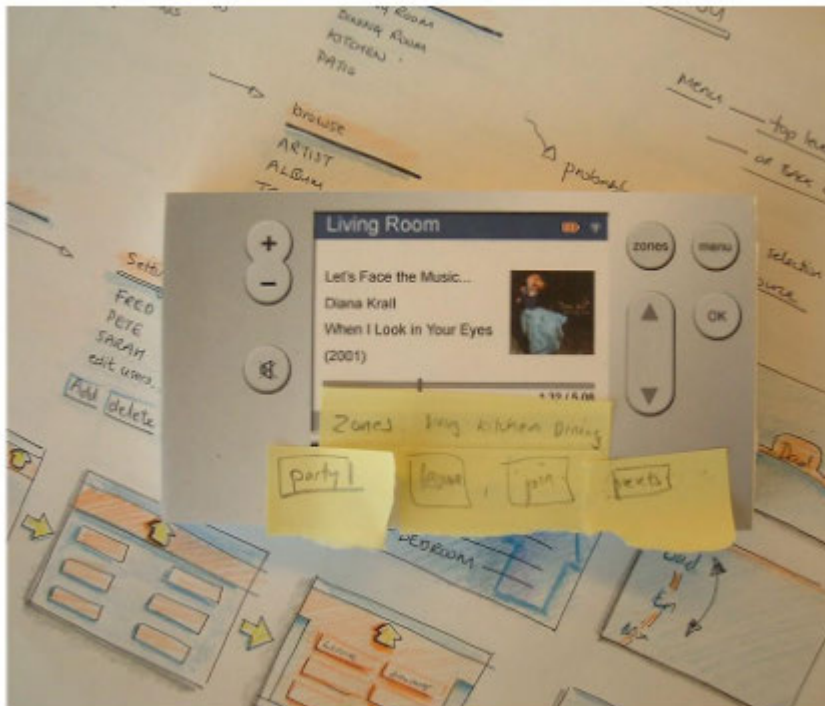
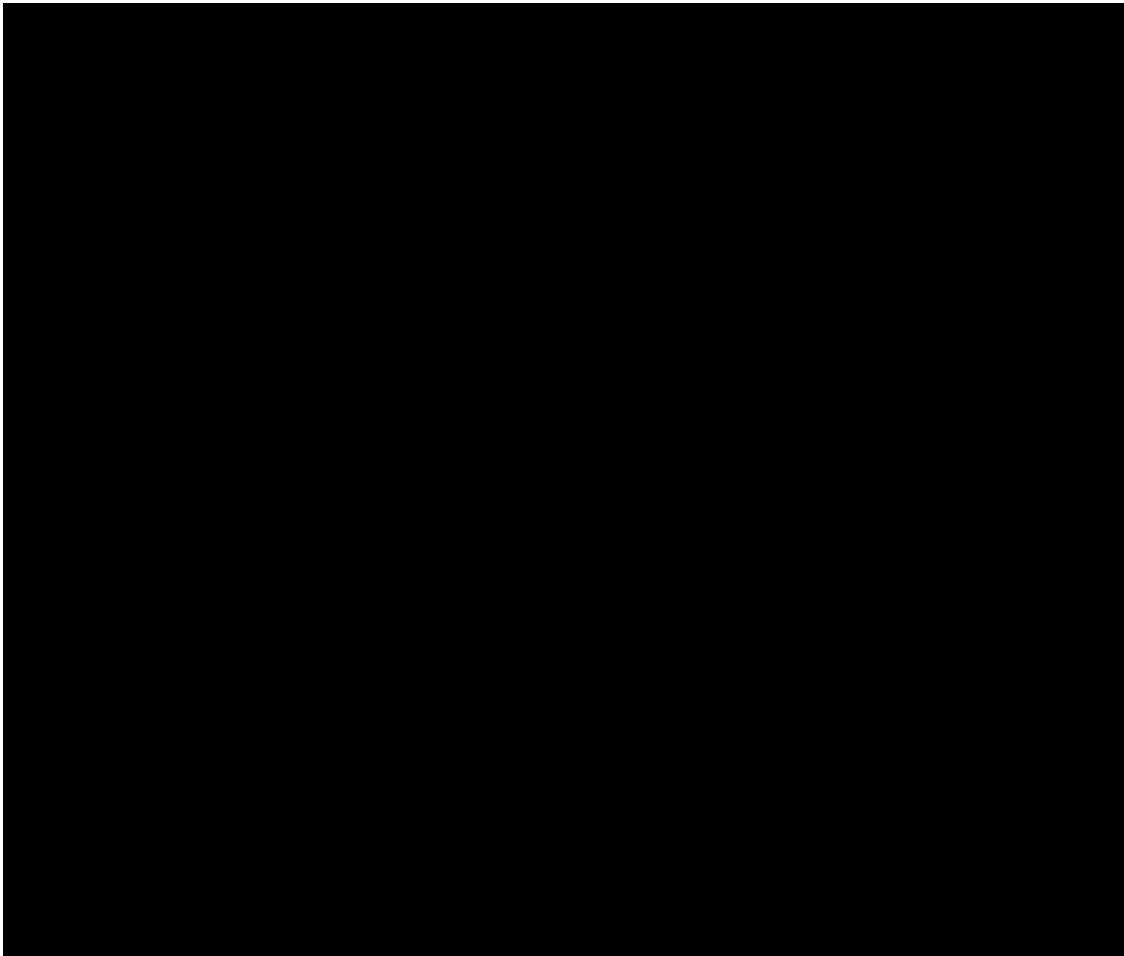
3. Highlight the zone you want to add to the group, and touch **OK**. If you want to join all the zones in your house to this music queue, select **All Zones-Party Mode**. All of your ZonePlayers will then play the same music until you drop the zones from the zone group.



IA at 443; Lambourne Dep. Ex. 1078 at 2-4.<sup>1</sup>

<sup>1</sup> I understand that Sonos recently produced a version of the April 2005 user manual. SONOS-SVG2-00227441 at -442. This produced version of the user manual appears identical to the version that I cite herein and in my Opening Report, and I hereby cross-reference this produced version for the same disclosures cited in my reports.

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SONOS-SVG2-00227363.

14. Sonos believed that the advances above were a distinction over prior art systems, and recognized that zone group creation was desirable and supported by the Sonos system.

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SONOS-SVG2-00227400.



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SONOS-SVG2-00227400; *see also id.* at -405 (February 2005), -406 (2004, February 2005); *see also* SONOS-SVG2-00227407 (October 2002 design document); *see also id.* at -410-413 (identifying standard hardware, software, and protocols used in development).



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Scenarios 9 July 03, Rob

#### A) Selecting music

- Select music from the music collections on the hard discs to play in the current zone.
- Select music from individual folders to play in the current zone.
- Select music the Rincon tuner to play in the current zone.
- Select a legacy source to play in the current zone.
- Select the music Rhapsody service and play a tune.

#### B) Zones

- Play the same music across all zones and then deal with different volumes in each zone.
- Stop the music from playing in one room, while retaining the music in the remainder of the rooms.
- Select a new album to play only in the living room.
- Move to the bedroom and choose different music to play there (while retaining the music in the living room).
- From the bedroom, stop the music in the living room.
- Go to the deck play the same music on the deck that is playing in the bedroom.
- Add the kitchen to the above music selection.

#### BACHELOR

Dave comes home from work, he wants to listen to music in his living room, He plunks down on the sofa and picks up the remote that he left there this morning. Immediately it comes to life and shows the same screen where he last used the remote before he went to work - playing national public radio through his Rincon tuner.

He uses the navigation buttons to select a favorite Miles Davis album and relaxes. After a while, he chooses to play something more upbeat as starts to get ready to go out. He navigates to play an Eminem album and then chooses to listen to the same song in all three zones of his house (living room, bedroom and kitchen). Thirty minutes later, just as he's leaving he picks up the remote and is able to stop the music in all zones at the same time.

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#### DINKS

Sarah is preparing for a party in the house. She's worked on a playlist for the occasion and starts it playing across all zones. Each zone needs to be set to a different volume but she's set the system to have default volumes in each room for party mode.

Later in the evening the guests are coming in from the patio, she decides to unhook the patio zone from the party mode so as not to disturb the neighbors. He does this effortlessly and without interrupting the music playback in the remainder of the house.

As the evening progresses, the playlist finishes and a guest is able to find some new music to play, without needing to understand zones.

#### FAMILY

Dad comes home from dropping the kids at their friend's house. He's got some time to do the bills. Picking up the remote, he wants to play music in the dining room. Mom is taking a nap in the bedroom. Earlier, the kids had been playing their Britney Spears album throughout the house at a high volume. Dad doesn't want to deal with the kid's music, so he selects himself as a user on the remote and is presented with just his music. He navigates to his favorite classical playlist to play in the living room at a lower volume and settles down to his bills. Later that afternoon, Dad wants the classical music to play in the den and the patio, so he adds these zones as the afternoon passes by. At this same time, mum has woken and, using their second remote, selects to play her Tony Bennett collection in the bedroom as she reads her book.

SONOS-SVG2-00227415; *see also* SONOS-SVG2-00227414 (email attaching document).



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Even the price is reasonable, as long as you understand the audience that Sonos is chasing: Although the ZonePlayer is a *digital audio hub*, meaning that it plays MP3 and WMA files that reside on your PC, the system is really competing with whole-house audio systems based on CD changers and 12-channel audio amplifiers. Those can run to \$1,000 a room for dedicated wiring, an in-wall volume-control and remote-control sensor, and a whole-house amplifier. With the ZonePlayer, you buy one remote (\$399), and for each room where you want music, you buy one chunky, 10-pound hub (\$499 each, or \$1,199 for two hubs plus a remote).

Unlike other digital audio hubs, which typically cost \$100 to \$200 and don't look half as striking, the ZonePlayer integrates a 50-watt-per-channel stereo amplifier. That means you can use traditional audio speakers without the need to hook the system to your existing stereo. While most users will choose to use that built-in amplifier, there is a line-level output to use with powered speakers or an external amp.

And not only does ZonePlayer have an Ethernet jack, it also has a four-port 10/100-Mbps switch, as well as proprietary (not 802.11b) wireless. Only the first ZonePlayer you install has to be wired. A 2.4-GHz peer-to-peer mesh network passes the audio along

the ZonePlayer can see network drives directly, not just as mapped drives of desktop PCs. Song information is stored on each ZonePlayer.

Most users love the idea of multiple independent streams of music: rock in the rec room, classical in the kitchen, and jazz on the patio, all simultaneously. That's something most other hubs can do. But the ZonePlayer does the opposite as well: It can play the same music throughout the house, perfectly synchronized. Even though that may seem drop-dead simple, other hubs don't do it. And you can join multiple rooms to play the same music or put something different on in other rooms on the fly.

You can also play Internet radio: The ZonePlayer supplies a sampling of about 70 stations,



**THE ZONEPLAYER ZP100** is as elegant as it is simple to set up. The remote has a large color screen for accessing your music.

As you might expect from a remote control that costs as much as a PDA, this one is a gem. It integrates a 3.5-inch backlit color display and 13 buttons. You move through lists by sliding your finger along a circular scroll wheel, then pressing a Select button in the center. On the LCD, you see album art, the name of the song playing, the artist, the album, the elapsed/total playing time, the next song up, and the remaining songs in the queue for each room (or zone).

If you want to crank up ZZ Top in your downstairs office, it takes just a couple of seconds to tap the Zones button and drop the music link to the living room. Want less volume for background music in the living room than in the kitchen? Press the volume-down button, then slide the

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SONOS-SVG2-00227422.

## Gadget That 'Streams' Music Around House Is Terrific but Pricey

By

Walter S. Mossberg Staff Reporter of The Wall Street Journal

Updated Feb. 24, 2005 11:59 p.m. ET

group the "Zones," so several receive the same music simultaneously. And you can mute or pause all the players in a house at once.

The system also can play back music from Internet radio stations. And you can plug any outside music source, like an iPod, into any one of the ZonePlayers and hear its music throughout the system.

Next month Sonos plans to add another function to the product: the ability to receive streaming music from [RealNetworks'](#) Rhapsody online subscription music service.

SONOS-SVG2-00227427.

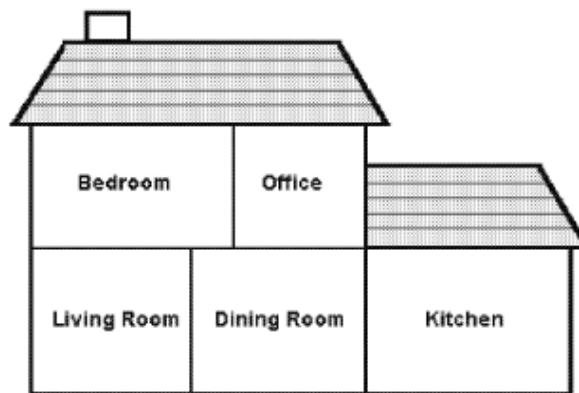
### Important user tasks

Rob Lambourne, 8 August 2003

The following describes a set of user tasks that our users should be able to manage easily using the remote.

#### Starting Scenario:

A house with 5 zone players in 5 rooms: Living Room, Dining Room, Master Bedroom, Kitchen and Office.



Start point all 5 zones are separated (not linked in any way). One zone – the office is playing music.



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#### **Zone linking**

Link/synchronize the music that is playing across zones

Possible scenarios for doing this

1. You are in the Living Room listening to music. You want to play that same music in the office and Kitchen.
2. You are in the bedroom listening to nothing. You want to listen to the same music that is playing in the office.
3. You are getting ready for a party and want to make every room except the bedroom play the same music.

From the room groupings above – be able change the volume in each room separately.

From the groupings above, be able to separate one room from the rooms that have been linked together, and then find some new music for that room to play.

SONOS-SVG2-00227437.

15. The user could also name individual speakers (zone players), in turn naming the zone groups. For example, below, “linking” the “Kitchen” Zone Player with the “Jack’s room” Zone Player is shown, and the resulting group is named “Jack’s Room + Kitchen.” The previously-saved and named group, for example “Jack’s room + Kitchen” in the example below, can also be modified by removing Zone Players from the group, as shown below.

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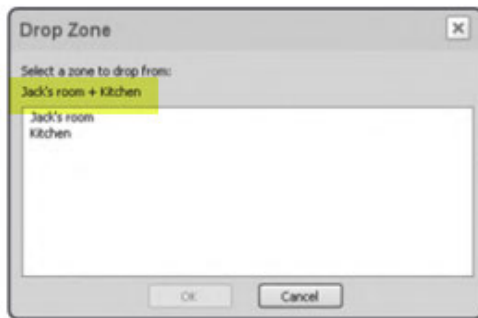
### To drop a zone from your zone group

1. From the **Zones** pane, highlight the zone group you want to change.
2. Choose one of the following options:

- Click **Drop Zone**.

Or,

- From the **Zones** menu, click **Drop Zone**.



3. Select the zone you want to unlink from the group, and click **OK**.

The zone that's removed from the zone group stops playing music. The other rooms in the zone group continue unaffected.

Lambourne Dep. Ex. 1077 at 31.

16. Zone Players and therefore groups of Zone Players may be named or renamed in accordance with the user's preference, including, for example, "Morning" or other "common themes" addressed by the Court's Order. For example, a user could name the Zone Players, to be joined in a zone scene, "Morning" and "Theme"—creating the zone scene "Morning Theme." And while a user may potentially name the zone scene with a "non-thematic" name, the Court has held that the capability to so name the zone scene is sufficient to meet the language of the claim.

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### Renaming a ZonePlayer

1. From the **Music** menu, select **System Settings**→**Rename ZonePlayers** and touch **OK**.
2. Use the scroll wheel to highlight the ZonePlayer name you wish to change, and touch **OK**.
3. Use the scroll wheel to select a new name from the list, and then touch **OK**.



4. You can also type a unique name by selecting **Enter New**.



5. Use the scroll wheel to select each letter, touching **OK** after each entry.
6. Touch **Accept** to accept the new name, or touch **Cancel** to leave the screen without making a change.

Lambourne Dep. Ex. 1078 at 18.

17. Other groups such as “Party Mode” are preconfigured and also available to the user. Another example of linking the “Kitchen” Zone Player with “[All Zones – Party Mode]” is illustrated below.



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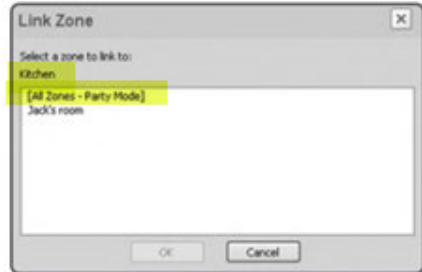
#### To link a zone to a zone group

You can create a zone group first and then select music to play, or you can add a zone to a zone group where music is already playing.



**Note:** Any zones you link will automatically drop their current music queue and begin to play the music queue from the highlighted zone. You may sometimes want to save your music queue before linking a zone. See "To create a Sonos playlist" on page 3-17.

1. From the **Zones** pane, highlight the zone you want to link another zone or zone group to.
  2. Choose one of the following options:
    - Click **Link Zone**.
- Or,
- From the **Zones** menu, click **Link Zone**.



3. Select a zone to add to the group, and click **OK**. If you want to join all the zones in your house to this music queue, select **All Zones-Party Mode**. All of your ZonePlayers will then play the same music until you drop the zones from the zone group.



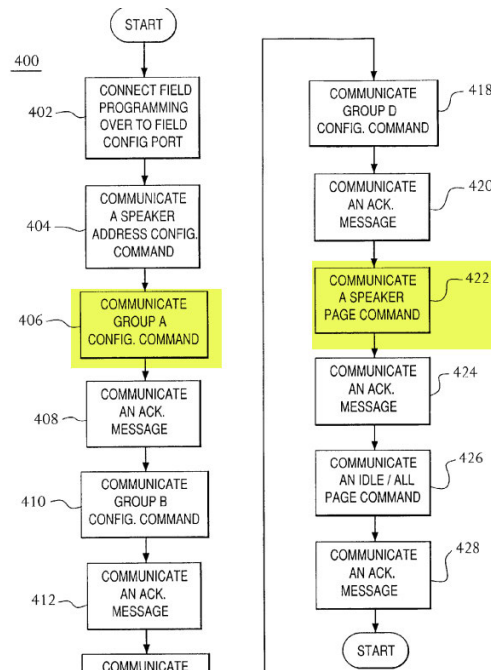
**Note:** The order in which you add a zone makes a difference. If you select **Link Zone** from a zone where there is no music playing, any zone you link to it will also be silent.

Lambourne Dep. Ex. 1077 at 30; *see also* IA at 123, 125 (describing multi-room features).

18. Under the Court’s Order, “Party Mode” is a speaker group with a thematic name, which satisfies the claim limitations under the Court’s Order.

19. To the extent that the Sonos prior art system did not explicitly disclose a “zone scene,” with the ability to pre-save (and name) customized speaker groups and later “invoke” the named group on demand, such features would have been obvious to a person of skill in the art, in view of at least the Sonos Forums.

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27. Accordingly, for the foregoing reasons, and under the Court’s Order, Sonos’s own prior art system renders obvious the “zone scene” element as used in the asserted claim, in combination with the Sonos Forums, and/or Nourse.

### (c) Logitech Prior Art System

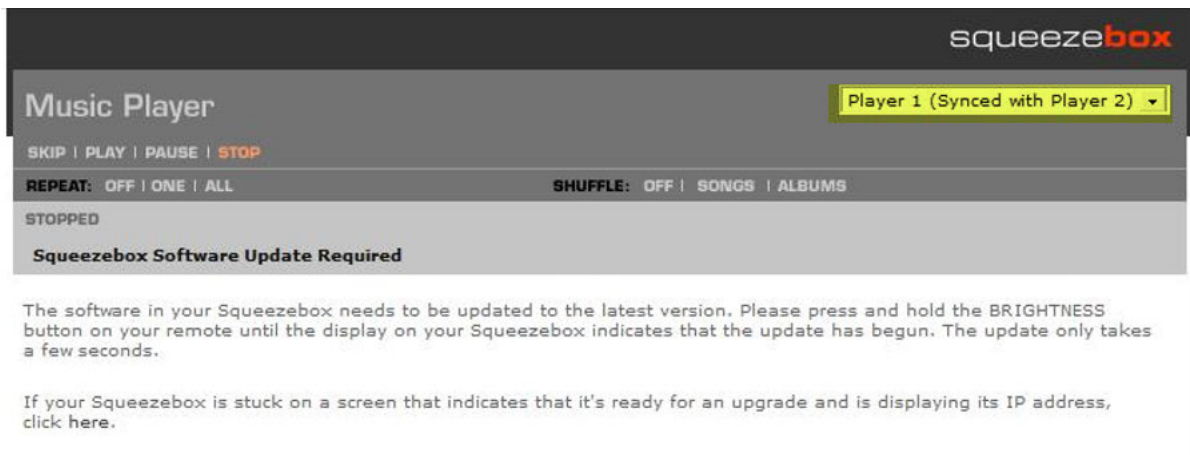
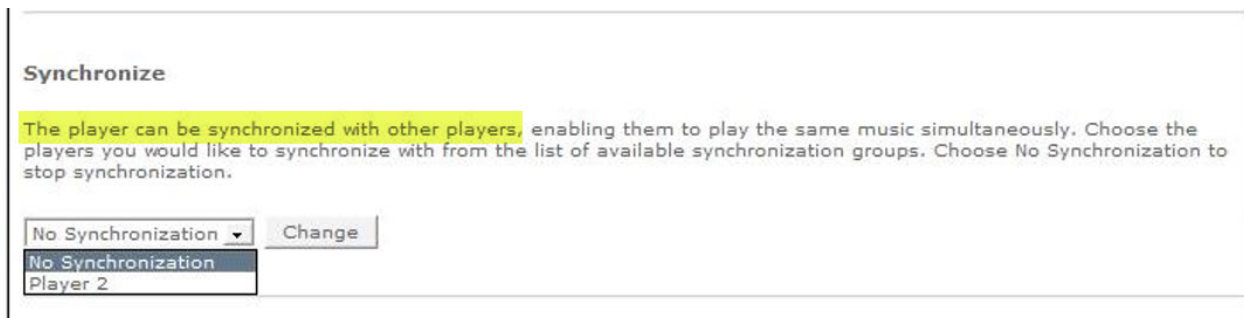
28. I provide below supplemental opinions based on the Court’s Order regarding how the Logitech prior art system discloses the “zone scene” limitation.

29. The user manual for Squeezebox 2 described controlling multiple Squeezeboxes by grouping them together. As one reviewer noted at the time, “Actually this is one nice feature of the Slimserver software. It enables you to group together a couple of players. Once done, the music can be controlled from each player (the other players react in sync), the only feature that works independently is volume control. And of course you can group / ungroup / regroup the players on the fly (from a Web interface or using a remote controller) . . . So instead of having a complicated and limited system, there finally is a clean architecture to handle multiroom sound systems. Instead of miles of cables there is a WiFi cloud covering the music library server (in a basement) and all

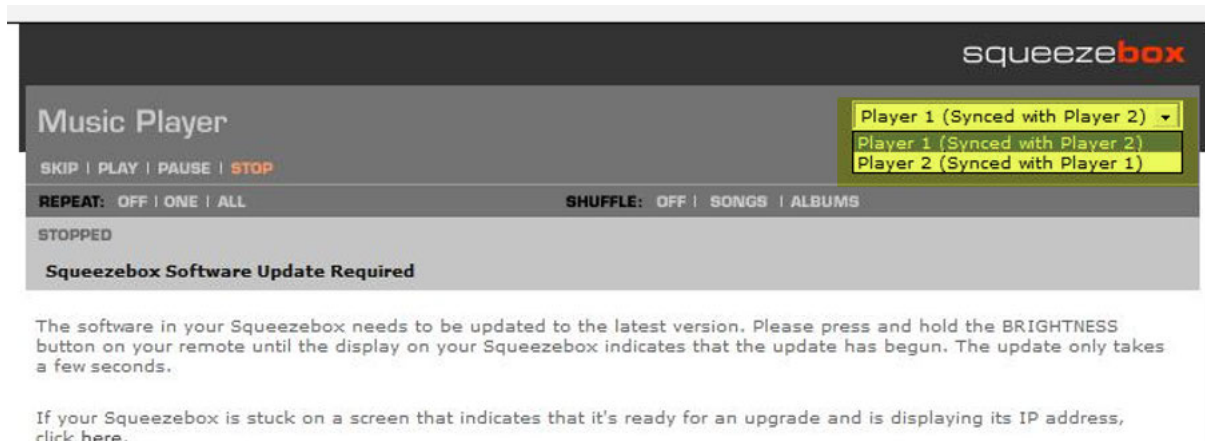
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players (in rooms). Rooms can be synchronized or independent, setup and especially using the system is very simple and intuitive.” GOOG-SONOSWDTX-00054659. This description matches the “zone scene” discussion in the Court’s Order, showing that the prior art Squeezebox system disclosed a set of previously-saved groups and “once done,” a user can later control each zone scene wherein the speakers in that zone scene will “react in sync.”

30. As shown in the annotated screenshots reproduced below, the SlimServer allowed a user to group together different players (*e.g.*, Player 1, Player 2) so that synchronous playback is performed.



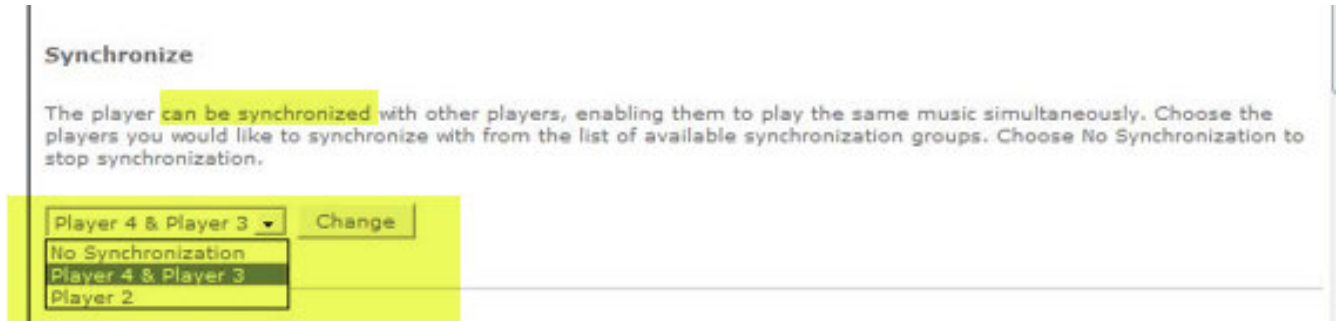
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31. The user of the SlimServer could change the name and identifiers of the Squeezebox devices, which in turn changes the name of the grouped Squeezebox devices. This corresponds to the Court's Order, holding that the user can provide a name for the zone scene such that he or she may later interact with that zone scene. Depending on the names provided, the zone scene may or may not include a thematic name. The Squeezebox devices may be played individually or as a group, and the SlimServer allowed a user to change the synchronization groups after they have been created and stored—again allowing the user to pre-save customized speaker groups and later invoke those zone scenes.



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32. In my testing of the Logitech prior art system using a single SlimServer, I was able to setup a synchronization group (zone scene), and later invoke it. As shown below, I setup a first Squeezebox player (“Player1”) which was playing the song “Don’t Tempt Me,” and also had a second Squeezebox player (“Player3”) which was turned off. I then synchronized Player1 (playing “Don’t Tempt Me”) with Player 3 (which was off)—Player1 switched to playing nothing while Player3 remained off (Step 1 as shown below). In other words, Player 1 received an indication to join a group, and joined the group. This matches the Court’s Order, which provided that user can create a zone scene with a name (here, including the identity of the players) and later play to speakers within that zone scene or invoke the zone scene itself.

33. The screenshots below show Player1 playing music, while Player3 remains off.

Player1:



Player3:

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34. The screenshots below show that while Player1 is playing, Player1 is synchronized with Player3, and Player1 switches to playing nothing, while Player3 remains off. The slimserver2 preferences file also shows Player1 in a sync group (having Group ID 980703837) with Player3.

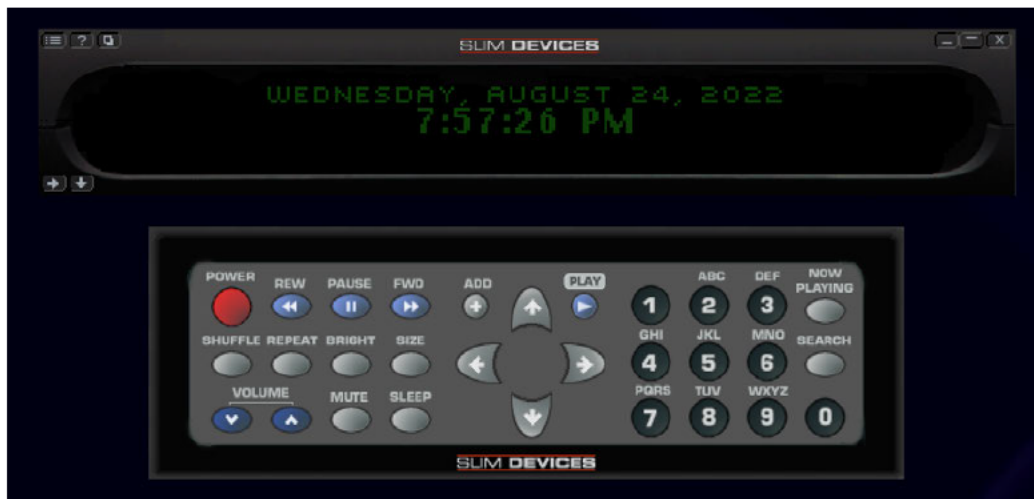
Player1:



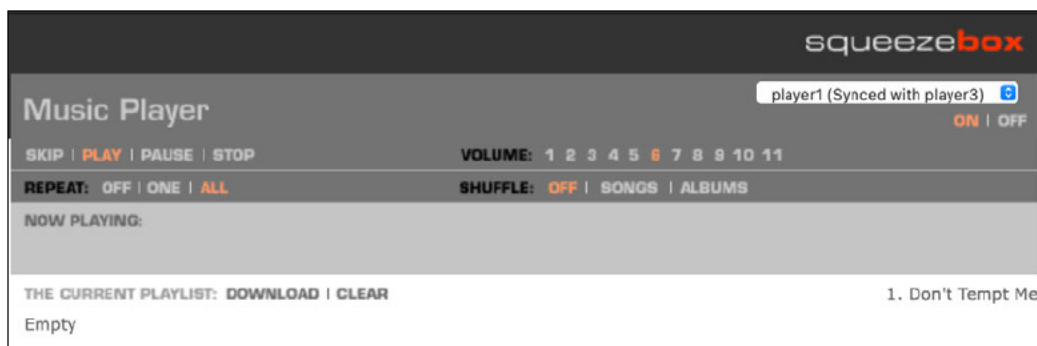
Player3:



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Web UI showing Player1 synchronized with Player3:



Server preference file:

```
[vmuser@slimserver2 ~]$ grep -P 'sync|playername|power|b' /etc/slimserver.conf
19:1e:67:04:72:30-playername = player2
19:1e:67:04:72:30-power = 0
19:1e:67:04:72:30-syncPower = 0
19:1e:67:04:72:30-syncVolume = 0
bc:2a:ae:6b:ab:ce-playername = player3
bc:2a:ae:6b:ab:ce-power = 0
bc:2a:ae:6b:ab:ce-syncPower = 0
bc:2a:ae:6b:ab:ce-syncVolume = 0
bc:2a:ae:6b:ab:ce-syncgroupid = 980703837
db:3a:52:e6:70:6b-playername = player1
db:3a:52:e6:70:6b-power = 1
db:3a:52:e6:70:6b-syncPower = 0
db:3a:52:e6:70:6b-syncVolume = 0
db:3a:52:e6:70:6b-syncgroupid = 980703837
```

35. After Step1, in which I synchronized Player 1 and Player 3, *i.e.*, created a group with Player1 and Player 3, I next chose to have Player1 play a new song “Jennie” on its own



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(Player3 still being off). Throughout this process, the server (slimserver2)'s preferences file indicated Player1 was in a sync group with Player3, (with group ID 980703837). In other words, Player1 was still configured to play in standalone mode, even after it has joined the group previously setup in Step 1. Again, this is consistent with the Court's Order, which establishes that although a group may be named and saved—and hence considered a zone scene—the group members may operate independently until the user “later invoke[s] the named groups on demand.”

Player1:



Player3:



Server Preferences File:

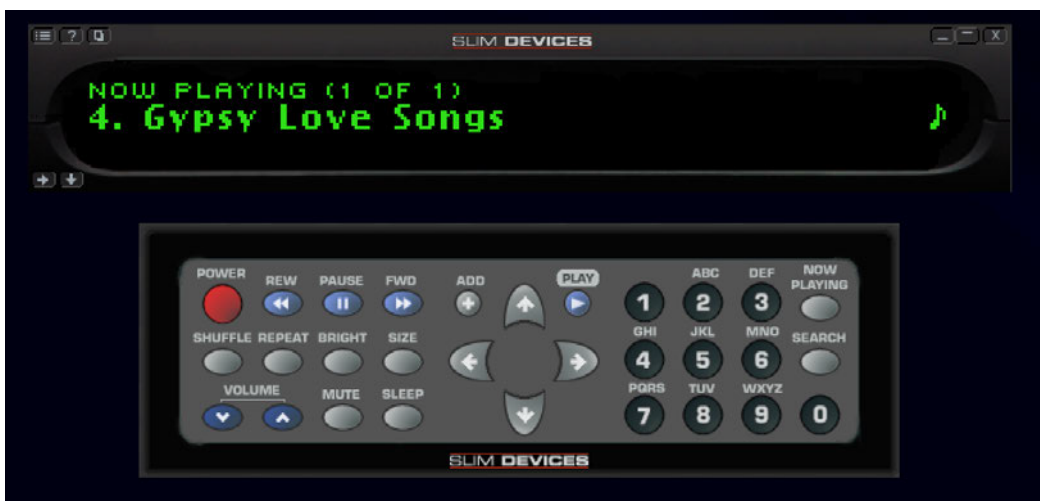
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```
[vmuser@slimserver2 ~]$ grep -P 'sync|playername|power\b' /etc/slimserver.conf
19:1e:67:04:72:30-playername = player2
19:1e:67:04:72:30-power = 0
19:1e:67:04:72:30-syncPower = 0
19:1e:67:04:72:30-syncVolume = 0
bc:2a:ae:6b:ab:ce-playername = player3
bc:2a:ae:6b:ab:ce-power = 0
bc:2a:ae:6b:ab:ce-syncPower = 0
bc:2a:ae:6b:ab:ce-syncVolume = 0
bc:2a:ae:6b:ab:ce-syncgroupid = 980703837
db:3a:52:e6:70:6b-playername = player1
db:3a:52:e6:70:6b-power = 1
db:3a:52:e6:70:6b-syncPower = 0
db:3a:52:e6:70:6b-syncVolume = 0
db:3a:52:e6:70:6b-syncgroupid = 980703837
```

36. While Player1 was still playing music individually, I was also able to “invoke” the Player1-Player 3 group, by selecting to play a different song on Player3, causing Player 3 to turn on, and both players 1 and 3 to play in synchrony, as shown in Step 3 below. Specifically, I selected to play “Gypsy Love Songs” on Player3, causing Player3 to power on and both Player1 and Player 3 to play “Gypsy Love Songs” in synchrony. The server (slimserver2)’s preference file shows Player1 is still in a sync group (Group ID 980703837) with Player3. In other words, after creating a group (Step 1), and having Player1 continue to play in standalone mode while being part of the group (Step 2), I was able to later “invoke” the group consisting of Player1 and Player 3, and have Player1 and Player3 play in synchrony. As discussed above, this behavior matches the Court’s Order with respect to zone scenes, as those zone scenes may be created and then only later “invoked,” which transitions speakers from acting independently to acting in accordance with the zone scene.

Player1:

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Player3:



Server:

```
[vmuser@slimserver2 ~]$ grep -P 'sync|playername|power\b' /etc/slimserver.conf
19:1e:67:04:72:30-playername = player2
19:1e:67:04:72:30-power = 0
19:1e:67:04:72:30-syncPower = 0
19:1e:67:04:72:30-syncVolume = 0
bc:2a:ae:6b:ab:ce-playername = player3
bc:2a:ae:6b:ab:ce-power = 1
bc:2a:ae:6b:ab:ce-syncPower = 0
bc:2a:ae:6b:ab:ce-syncVolume = 0
bc:2a:ae:6b:ab:ce-syncgroupid = 980703837
db:3a:52:e6:70:6b-playername = player1
db:3a:52:e6:70:6b-power = 1
db:3a:52:e6:70:6b-syncPower = 0
db:3a:52:e6:70:6b-syncVolume = 0
db:3a:52:e6:70:6b-syncgroupid = 980703837
```

37. Accordingly, I understand that with the Logitech prior art system, a user could both

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setup and later invoke “zone scenes,” with speakers having the ability to continue to operate in standalone mode in the interval between setup and invocation, as described in the Court’s Order.

38. As such, the Logitech/Squeezebox system discloses the “zone scene” limitation under the Court’s Order.

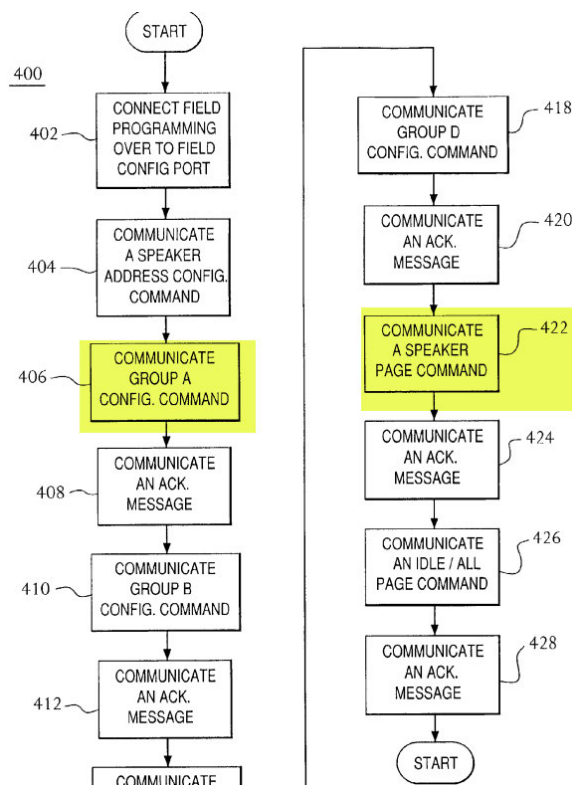
39. To the extent it is found that the Logitech/Squeezebox system did not explicitly disclose a “zone scene,” with the ability to pre-save (and name) customized speaker groups and later “invoke” the named group on demand (*i.e.*, a “zone scene” under the Court’s construction), such features would have been obvious to a person of skill in the art, in view of at least Nourse. Nourse discloses a conventional “centralized speaker system that allows multiple speakers connected to a centralized amplifier speaker line to be monitored and controlled from a central location via a master/slave protocol.” Nourse at Abstract; *see also, e.g., id.* at 2:18-20 (“In accordance with the present invention, a speaker system is provided having distributed speakers and amplifiers and centralized speaker monitoring and command control.”), FIG. 1.

40. Nourse discloses the ability to have overlapping zone groups, with one speaker being part of two groups at the same time. *See, e.g.,* Nourse at 3:57:60 (“Each of the plurality of speakers 152 preferably has a unique 16-bit address. Each of the plurality of speakers 152 can further be assigned up to four group identifiers (IDS).”), 4:4-5 (“first speaker 152, can be assigned to more than one group”), 4:11-13 (“up to 16 master controls units 102 can be controlled individually and/or simultaneously via the computer 154 using the master control unit 102 addresses.”). A person of skill in the art at the time of the alleged invention working with the Logitech System would have found it obvious to look to other “centralized speaker system[s]” for ways to improve the zone scenes (as described by the Court) within the Logitech System, such as by allowing overlapping groups.

41. Nourse also discloses the ability for a speaker to operate independently even after

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being added to a zone scene, as described in the Court’s Order. *See, e.g.*, 4:53-55 (“remote units 130 each monitor the incoming message from the master unit 102 to determine whether it is being addressed either as an individual unit or as part of a group”). This is disclosed in Nourse, for example in relation to Figure 4, reproduced below, where at step 406 “the field programming device communicates the Speaker Group A configured command to the remote unit 130” and later, while remote unit 130 is still in Group 1, “at step 422, the field programming device communicates a Speaker Page configure command to the remote unit 130.” Nourse at 7:37-39, 8:19-20.



42. Accordingly, for the foregoing reasons, and under the Court’s Order, the Logitech/Squeezebox system renders obvious the “zone scene” limitation as used in the asserted claim, in combination with the Sonos Forums.

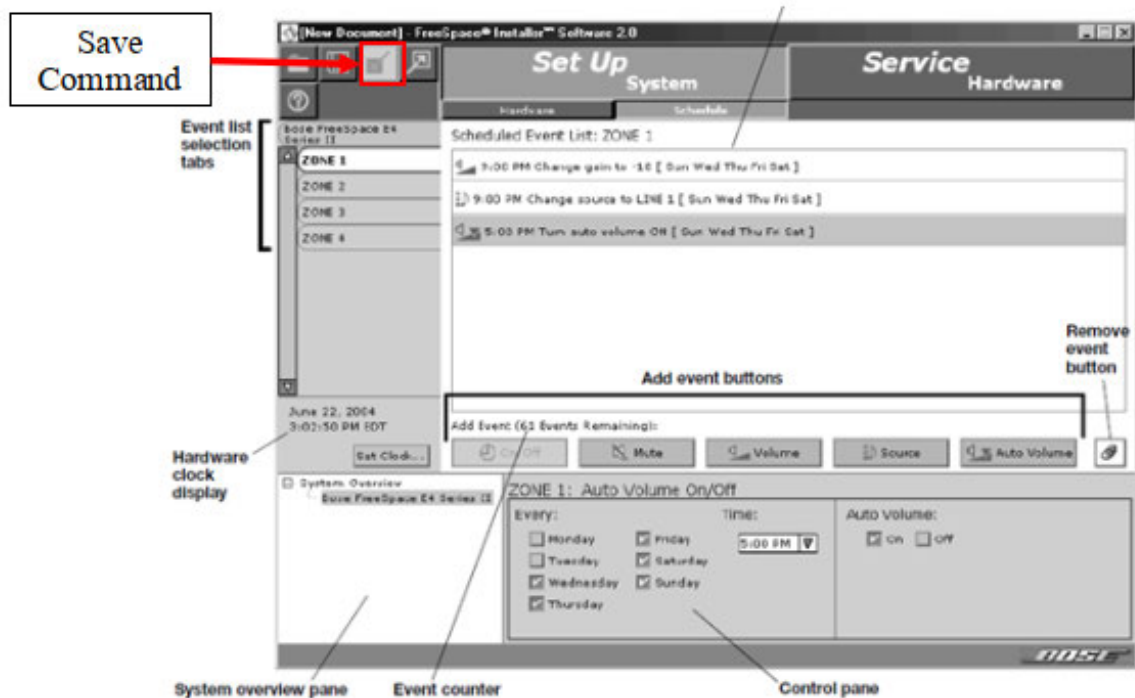
#### (d) Bose Prior Art System

43. The Court’s Order discussing the meaning of “zone scene” has affected the opinions that I originally issued regarding the invalidity of claim 1 of the ’885 patent with respect

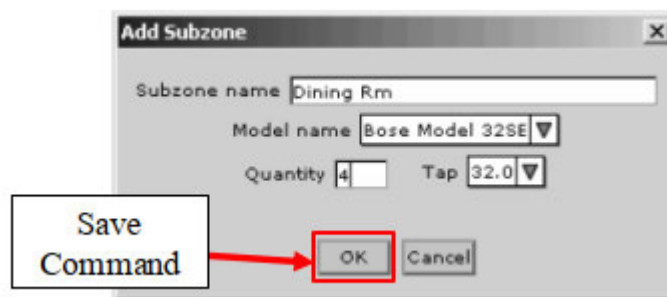
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to the Bose prior art system.

44. According to the FreeSpace Owner's Guide publication, the FreeSpace® installer interface allowed the user to automate the system by creating scheduled events to control how selected zones and subzones are invoked at predetermined times. *See, e.g.*, BOSE\_SUB-0000101 (annotated below). Specifically, the FreeSpace installer interface allowed a user to create a named speaker group or sub-group that could be pre-saved and later invoked, *i.e.*, a "zone scene."



BOSE\_SUB-0000101 (annotated).



BOSE\_SUB-0000062 (dated 2004) at -107, -108, -110.

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45. As such, under the Order’s construction of the term “zone scene,” the Bose prior art system discloses this limitation.

**2. “Indication” that a “zone player has been added,” and the “indication” identifying “at least the first zone player and second zone player.”**

**(a) Court’s Order**

46. In addressing Google’s argument that the accused products do not receive an “indication” that the “zone player has been added to” a first or second zone, the Court found “[t]he plain language of the claim does not require a follow-up indication memorializing that the zone player has already been added to the group by an initial command so that the zone player can use that information later. Rather, the claim simply requires the zone player to receive an indication from the network device that it has been added to a zone scene. Because the accused players only receive the ‘join\_group message’ after some action has been taken to add them to a group, they meet this limitation.” Dkt. 309 at 10. Accordingly, based on the Court’s Order, I understand that the requirement for an indication that a “zone player has been added” can be satisfied by a user action indicating that a speaker should be added to a zone scene, followed by the zone player receiving “an indication from the network device that it has been added to a zone scene.” *Id.*

47. In addressing Google’s argument that a speaker that has been added to a zone scene must know what other speakers are in the group, the Court understood the word “comprising” to modify “zone scene” rather than modifying “indication.” Dkt. 309 at 11. In its Order, the Court stated “[t]he ‘comprising’ phrase serves to clarify that a zone scene is required to be comprised of a group of zone players, not that the indication is required to be comprised of a group of zone players.” Dkt. 309 at 11. Accordingly, based on the Court’s Order, I understand that the requirement for the “indication” identifying “at least the first zone player and second zone player,” can be satisfied regardless of whether a speaker being added to a zone scene knows what other



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within the zone scenes may coordinate using a leader-follower protocol as disclosed in the Squeezebox system as opposed to a direct coordination system implied by having each zone player maintain group membership. *E.g.*,

**Slim/Player/Source.pm**

```

482  # if there's a chunk in the queue, then use it.
483  if (scalar(@{$client->chunks})) {
484
485      $chunk = shift @{$client->chunks};
486
487  } else {
488      #otherwise, read a new chunk
489      my $readfrom = Slim::Player::Sync::masterOrSelf($client);
490
491      $chunk = readNextChunk($readfrom, $maxChunkSize);
492
493      if (defined($chunk)) {
494
495          # let everybody I'm synced with use this chunk
496          foreach my $buddy (Slim::Player::Sync::syncedWith($client)) {
497              push @{$buddy->chunks}, $chunk;
498          }
499      }
500  }

```

69. To the extent Dr. Almeroth finds that the above does not reflect leader-follower coordination, I note, consistent with the Court’s statements that the “indication” does not require a zone player communicating with other speakers present in the group, that there is similarly no requirement that the zone player being “configured to coordinate” communicate *directly* with other zone players. In my opinion, Squeezebox communications via the SlimServer would also meet the claim requirements for similar reasons.

**(d) Bose Prior Art System**

70. As I stated in my Opening Report, the Bose prior art system, publicly disclosed at least as of May 6, 2006 via the Bose FreeSpace Owner’s Guide, disclosed the use of the claimed

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“indication.” This is especially true in light of the Court’s Order.

71. As I discussed in my Opening Report, Bose LifeStyle allows a user to make a selection and add multiple rooms and zones to the Lifestyle ecosystem.

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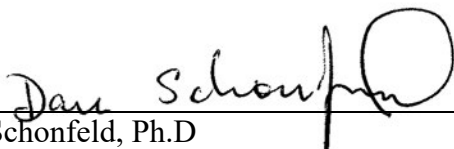
### III. RESERVATION OF RIGHTS

86. In the event I am called upon to testify as an expert witness in this case, I may also discuss my own work, teaching, and publications in the field, and knowledge of the state of the art in the relevant time period. I may rely on handbooks, textbooks, technical literature, my own personal experience in the field, and other relevant materials or information to demonstrate the state of the art in the relevant period and the evolution of relevant technologies. I also reserve the right to rely on demonstrative exhibits to help explain the opinions set forth in this Report.

87. I reserve the right to modify or supplement my opinions, as well as the basis for my opinions, in light of new positions set forth by Sonos, to the extent Sonos is permitted to advance those positions. This includes positions concerning the scope and interpretation of the asserted claim, infringement allegations, conception, diligence, and reduction to practice, and secondary considerations. It is also my understanding that Sonos may submit an expert report corresponding to this Report. I reserve the right to rebut any positions taken in that report.

88. I, Dan Schonfeld, declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

DATED: August 29, 2022

  
\_\_\_\_\_  
Dan Schonfeld, Ph.D